

(No Model.)

F. B. BRISTOL.
PUNCH AND DIE.

No. 443,353.

Patented Dec. 23, 1890.

Fig. 1.

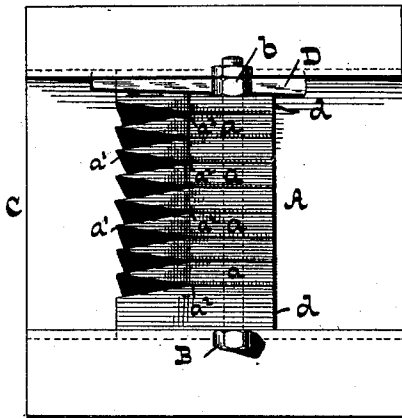


Fig. 2.

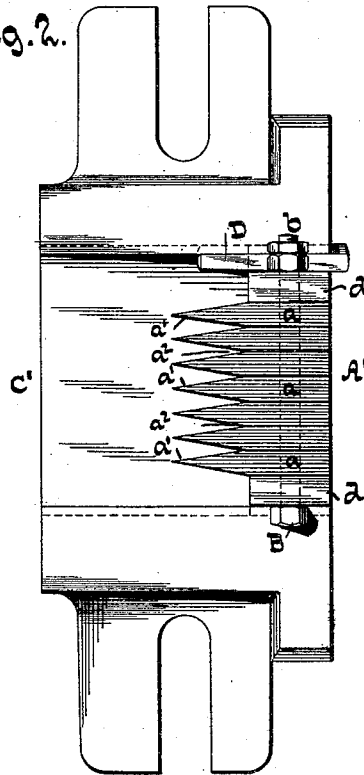


Fig. 3.

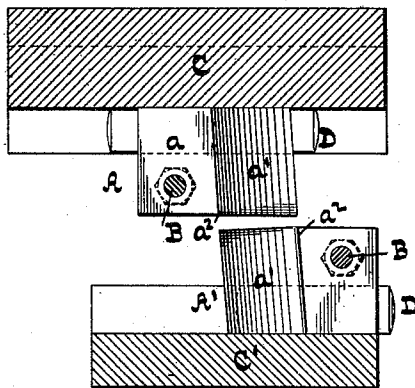


Fig. 4.

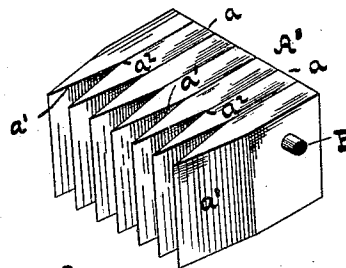
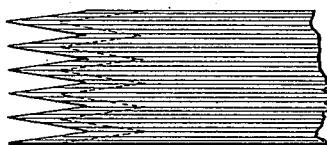


Fig. 5.



Fig. 6.



WITNESSES:

A. Faber du Faur
F. Fohr

INVENTOR

Franklin B. Bristol
BY *A. Faber du Faur*
his ATTORNEY

UNITED STATES PATENT OFFICE.

FRANKLIN B. BRISTOL, OF NAUGATUCK, CONNECTICUT, ASSIGNOR OF TWO THIRDS TO BENJAMIN H. BRISTOL, OF SAME PLACE, AND WILLIAM H. BRISTOL, OF HOBOKEN, NEW JERSEY.

PUNCH AND DIE.

SPECIFICATION forming part of Letters Patent No. 443,353, dated December 23, 1890.

Application filed May 5, 1890. Serial No. 350,696. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN B. BRISTOL, a citizen of the United States, and a resident of Naugatuck, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Punches and Dies, of which the following is a specification.

My invention has reference to improvements in punches and dies for cutting sheet-metal blanks, and especially to punches and dies for cutting out angular or serrated blanks for belt-fasteners and the like.

It consists, essentially, in a punch or a die formed of a number of separate sections joined together by any suitable means, each section being provided with cutting-edges tapering uniformly to a point, the combined sections forming a continuous angular or serrated cutting-edge. By this improved construction I am enabled to obtain sharp clean angles at the bases of the tapering cutting-edges, and furthermore, in case of breakage or abrasion of any one of the sections the substitution of another section involves but a slight expense and requires a short period of time only, while at the same time the blanks can be successively punched out without waste.

In the accompanying drawings, Figure 1 represents a plan view of a punch constructed according to my invention. Fig. 2 is a similar view of a die. Fig. 3 is a sectional elevation showing the punch and die in their relative operative positions. Fig. 4 is a perspective view of a punch (or die) detached from the jaw or bed. Fig. 5 is a face view of a blank as cut by the punch and die. Fig. 6 is a similar view of the sheet-metal stock from which the blank is cut.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a punch composed of a number of sections *a* joined together side by side by any suitable means—for instance, by a bolt B, passing through the sections, and a nut *b*, in conjunction with which latter a lock-nut may be used. Each section is provided with cutting-edges *a'*,

tapering uniformly to a point. Consequently the combined sections will present a continuous angular or serrated cutting-edge. It will be seen that by virtue of this construction the inner angles *a²*, formed between the several sections *a*, can be made as acute or sharp as may be desired by giving to the sides the necessary taper, and that any section when broken or worn can be readily removed and another substituted, or the length of the punch can be altered at will. The punch thus formed can be secured in a jaw or chuck, as C, Figs. 1 and 3, by any suitable means—for instance, by the key D. Suitable blocks, as *d*, may be used to fill up the jaw or chuck in case the punch is not wide enough to fit the chuck, the bolt B in this case passing through the blocks also.

The construction of the die is similar to that of the punch, and it is similarly fitted to the bed C' of the machine.

The exterior and interior edges of the punch and die are properly beveled for clearance, and the upper face of the die may be inclined to produce a shearing action on the stock fed between it and the die.

In Fig. 5 I have shown a blank for a belt-fastener as cut by the punch and die, for which purpose I have found the latter especially useful. Fig. 6 illustrates the stock after each stroke of the punch.

What I claim as new, and desire to secure by Letters Patent, is—

A punch or die for cutting belt-fastener blanks, composed of a number of sections *aa*, each provided with cutting-edges tapering uniformly to a point, said sections being joined together by means, such as the bolt B, to form a continuous serrated cutting-edge, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 26th day of April, 1890.

FRANKLIN B. BRISTOL.

Witnesses:

ISAAC A. MORSE,
THOMAS CONRAN.